

05



# Technology and Distribution



## TECHNOLOGY AND DISTRIBUTION

Significant changes in the divisional structure of Technology and Distribution occurred during the year. A new Director was appointed and the former Technology and Distribution division and the Television and Radio Operations departments were amalgamated. The restructure brings together all technical, engineering, transmission and broadcast operations of Television and Radio. This streamlined structure has resulted in operational and budgetary efficiencies.

The SBS '07 initiative is well advanced. Introduced in 2004-05, the initiative involves a comprehensive and systematic review of SBS's existing workflows with the objective to re-design them so that they better correlate with major investments in new technology and infrastructure. Close cooperation with SBS department heads and users will ensure that business and strategic goals are met. A Capital Development manager, appointed in November 2005, has identified a shortlist of major projects, the first being the installation of a revamped TV airtime Sales and Traffic System which will enable SBS to better control its advertising inventory. It is scheduled for completion in late 2006. Other projects include the multichannel playout system, which is currently being tested in the market, and the non-linear newsroom system.

## INFORMATION TECHNOLOGY

### Subtitling System

The new subtitling system, commissioned during the year, is providing substantial efficiencies in workflow and program availability. The system is available to both the Content and Sales Divisions within the organisation.

### Storage Area Network (SAN)

Investigations commenced in early 2005 to determine the requirements for the SAN upgrade for SBS's Sydney headquarters. The tender was distributed in November 2005 and the selection was completed in February 2006. Planning on the final configuration and data migration has begun and 'sign-off' is expected in August 2006.

### The World Game web infrastructure

In anticipation of increased online traffic for the FIFA World Cup, SBS's web infrastructure relating to The World Game website was reviewed and successfully upgraded to cope with the increased traffic.

### Sales and Traffic System for Television

Responses were received from 14 companies of which six tenders were further reviewed by the Tender Selection Committee. The successful tenderer was notified in June 2006 and work, currently underway, is expected to be completed in the third quarter of the 2006-07 financial year.







 The Sydney studio crew prepares for another World Cup broadcast

## TELEVISION ENGINEERING

### Digital TV and Mobile Receiver Trial

Digital Video Broadcasting to Handheld devices (DVB-H) was launched in Sydney in July 2005 as a trial service involving SBS, three other free-to-air broadcasters and 14 pay TV channels.

The SBS DVB-H service was a simple re-transmission of SBS Television, but it could also be modified to include interactive services. The Sydney-based 15-month trial was designed to test the technical capability and commercial prospects for DVB-H applications in Australia, and was the first high power, multi-channel trial in the world.

SBS TV engineers worked closely with Broadcast Australia, the holder of the DVB-H broadcasting/ datacasting licence, to install the encoding system for SBS's trial broadcasts.

### Staffing and Support

Staffing initiatives, introduced in 2005, helped considerably in reducing potential on-air technical problems. Greater coordination of activities and the refurbishment of the technical workshop also produced greater efficiencies.

### Documentation and Knowledge Sharing

The Television Engineering team underwent training in the new Vidcad documentation package. Standard installation guidelines and practices have also been set up for future operations, providing a platform for ongoing documentation of SBS's technology. Technical manuals are being produced for major events, and this was particularly important for SBS's comprehensive World Cup coverage.

## RADIO ENGINEERING

### Studio Digitisation

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The digitisation of SBS Radio studios was completed in October and was followed by training for broadcasters on the use of the new digital mixers. One of the voice booths was converted to a broadcast studio and Telos Radio Talk Back System was deployed in all the renovated studios.

### Netia Upgrade

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Netia Audio Servers are scheduled to be replaced in the coming financial year, having been in operation since 2001. It is also planned to change to a new Windows 2003 Server and a new version of Netia.

### CD Storage System

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With hard disk storage becoming more affordable, plans are underway to install a CD server system to download CDs. This will help radio broadcasters to browse the collection and import them into their programs. Installation of the system in Melbourne is anticipated in August 2006.

### Digital Radio

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Digital radio broadcasting is expected to begin in January 2009 and the Federal Government has announced that SBS and the ABC will share one multiplex. SBS continues its participation in digital radio trials to test MPEG 4 AAC should this standard be accepted and ratified by WorldDAB and ETSI.

### Codecs

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SBS Radio is replacing the MPEG 1 codecs, in use for more than 10 years, with the latest MPEG 4 AAC codecs. The more advanced MPEG 4 coding will provide better quality at lower bit rates.



 Belinda Achterstraat in control at the Kaiserslautern OB

### Business Continuity

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POTS codecs are being installed in the four transmitter sites in Sydney and Melbourne as part of the Business Continuity Plan. This will enable one production centre to deliver programs to the transmitters of the other production centre, should one centre fail. The codecs will enable SBS to send broadcast quality audio signals over a single telephone line to the transmitters in the event of failure.

## CAPITAL DEVELOPMENT

SBS is currently testing the market for alternatives for its playout facilities. This major project gives SBS greater flexibility and efficiency in how we deal with content. State-of-the-art technology, used collaboratively, will mean that tape will be handled only once and after that all work will be performed in a non-linear, file based domain. Material will be automatically archived at two different sites, guaranteeing the preservation of our special footage. Business continuity will improve and will be more efficient, with a backup playout site automatically on standby.

## TRANSMISSION SERVICES

### Digital Radio Trials

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SBS continued its participation in trials of digital radio in Sydney and Melbourne and gained access to audience research conducted by Broadcast Australia. SBS also instigated trials of Digital Radio Mondiale on 1440 kHz in Canberra. This trial provided valuable input into the Australian Communications and Media Authority planning process.

### Transmission Services

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Transmission Services (formerly Network Development and Operations) in coordination with Broadcast Australia, SBS's largest transmission service supplier, continued the rollout of new digital television services throughout 2005-06.

SBS Television transmitted its programs throughout Australia via the following means:

- ⊕ 250 terrestrial transmitters that deliver its analogue service through contracts with three service providers, Broadcast Australia, Imparja and Watson's Technical Services;
- ⊕ An estimated 341 self-help transmitters owned and operated by local communities in mostly remote regions of Australia;
- ⊕ Four Optus Aurora satellite services to all of Australia, including approximately 60,000 remote direct-to-home receivers;
- ⊕ Four digital television satellite services via Optus to all of Australia, providing the full suite of SBS digital television;
- ⊕ 161 digital terrestrial services which cover all capital cities and major regional centres; and
- ⊕ Re-transmission services via the cable subscription services of Optus Vision and Foxtel, and the satellite subscription services of Austar and Foxtel.

## Digital Television Transmission

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SBS's digital service, which began in January 2001, continued to rapidly expand beyond State and Territory capitals. During the year, a further 37 new services began, bringing to 161 the total number of digital services.

All mainland State and Territory capital cities are now connected via Telstra's digital video network. Satellite distribution of SBS's digital service is now available throughout Australia, allowing for digital rollouts in more remote locations.

The new partnership with Broadcast Australia has streamlined the rollout process, ensuring the faster delivery of SBS's digital services.

### Analogue Television Transmission

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New transmission facilities have been commissioned to extend SBS coverage to areas of populations between 3,000 and 5,000. The partnership with Broadcast Australia has allowed SBS to improve its national coverage target, thereby improving long-term network availability for SBS analogue television.

### Self-Help Transmitters

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The Self-Help Subsidy Scheme, funded by the Federal Government and administered by SBS, provides eligible community groups or local government instrumentalities with 75% of their start-up capital costs for television transmitter installations and 100% of the establishment costs for Radio services.

Two booklets, *Self-Help Guide* and *Self-Help Subsidy Guidelines* are available from SBS Transmission Services, and PDF versions of these documents are available on the SBS website.

Similarly, the Black Spot Program assists local communities to install their own transmitters in locations with poor reception. Of the sites identified for self-help funding, 267 have been licensed to commence SBS services, with most already on air.

## Satellite Services

SBS continues to provide direct-to-home analogue television and radio services through the Optus C1 satellite. Optus B3 and B1 satellites are used for the distribution of four digital multiplexes to regional and remote transmitter sites, providing the full suite of SBS multichannels across Australia. The B1 services were transitioned to New Skies NSS-5 satellite pending the launch of Optus D1. One SBS service is also available to viewers of the Austar pay TV service, and three SBS digital TV channels and two radio channels are available to Foxtel digital satellite subscribers.

## Radio Transmission

SBS Radio transmitted its programs to all State and Territory capitals and some major regional centres via the following means:

- ⊕ 14 terrestrial radio transmitters that deliver SBS Radio under the Transmission Service Agreement with Broadcast Australia;
- ⊕ Five self-help transmitters owned and operated by local communities in Young, Wagga Wagga, Bathurst, Longreach and Mintabie provide local transmission of the national signal; and
- ⊕ Two SBS Radio channels (Sydney AM and FM) are also available in Wollongong and on SBS's digital television service. These same services can be accessed via the Foxtel digital satellite subscription service.



## Audience Feedback

The vast majority of viewer complaints received by SBS Transmission Services related to viewer equipment: antenna, cabling, set-top boxes and location. In 2005-06, 489 telephone calls concerning possible transmission problems were logged. These were: Queensland 175; New South Wales 135; Victoria 85; Western Australia 33; South Australia 23; Tasmania 20; Northern Territory 8; Australian Capital Territory 5; and five were not stated.

The majority of problems were picture and sound quality, intermittent signal failure, no signal at all, and inability to locate SBS's digital signal. A considerable number of reception problems concerned the lack of an appropriate UHF antenna, necessary antenna repairs or alterations to antenna positioning. In Brisbane, where a Signal Frequency Network operates, nine transmitters provide digital services to Brisbane, the Sunshine Coast and the Gold Coast. Overlapping signals, especially at the transmitters' outer limits, occasionally caused reception problems. Tests to rectify the problem began in May.

Callers who reported equipment problems were sent a copy of the ACMA brochure, *Better Analogue Reception*, or referred to the Digital Broadcasting Australia website. If the problem concerned signal interference, callers were referred to ACMA or the Digital Television Interference Helpline. In some instances the issue was reported to SBS's service provider. In accordance with our agreed guidelines, viewers with transmission problems were referred to SBS's service provider, the SBS Master Control Room or SBS Television Engineering.

Some callers who receive SBS through Foxtel or Optus were referred to these corporations if they had SBS reception problems. Other callers who receive SBS via a self-help transmitter, operated and maintained by a local organisation, were referred to the appropriate contact, usually the local Council.

**"THE WORLD GAME WEBSITE  
IS JUST BRILLIANT. IT TELLS  
ME ALL I NEED TO KNOW."**